DECREASING NOISE SENSITIVITY IN SPEECH PROCESSING UNDER ADVERSE CONDITIONS

Abstract of the Disclosure

To perform reliable speech or speaker recognition (e.g., verification or
identification) in adverse conditions, such as noisy environments, a noise compensation
mechanism increases noise robustness while speech processing by decreasing noise
sensitivity. Signal attributes and noise attributes of at least two signal portions including
speech may be determined. Using the signal attributes of both signal portions, a distance
measure for one signal portion by using the signal attributes of both signal portions may
be derived. In one embodiment, using a Parallel Model Combination (PMC) algorithm, a
normalized absolute distance score may be obtained for a noisy speech signal including
an utterance. For accurate rejection or acceptance of speech or speaker (registered
speakers or imposters), the normalized absolute distance score may be compared to a
dynamic threshold or one or more speech or speaker profiles.